

Agricultural
Research
Service

United States
Department of
Agriculture

Official ARS Laboratory Notebook

Notebook No. II

Name WORK LOG MAY 1970

Location TEQUITE COLLECTION

CRIS Project No. 1

Title COLLECTION DATA

Dates Used: From MAY 1970

To LITTLE CAYMAN 1975



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Department of
Agriculture

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- Use this book as a daily log for your research work plans and results.
- Do not write in the notebook in pencil or other erasable medium.
- Make corrections by crossing through the item and initialing.
- Do not remove any pages from this book.
- Cross-reference instrument printouts when such data is retained in a separate location.
- Date entry and initial each filled page. Periodically have your entries witnessed (signature and date) by another employee, particularly where patentable information or data pertinent to regulatory activities could possibly be entered.
- This book and the information contained therein is the property of the Agricultural Research Service.

357-1897
→ 3471
301 3451697

Cleo + Laruna
50103

Jan Camacho
66299

Yupariba Fall

Augustine Andres
Kuparukari
Siquilbo Nino
(the village)

Socks

atlantic Dept. Store
no. Church St.

mes sp.
naked

50
8 + 26 00 US
42.60
40
26

~~WILSON'S MONKEY MOUNTAIN~~

BDG 94-Termite Collection

BDG 94-1- ^{-Sat.} ~~Syntherisma~~ Monkey Mountain - Dec. 10 (?) - grassy
near mountain - small mound - 2, ♀ - ~~last~~
Sunday Perard-

BDG 94-2- *Nasutitermes* sp. - low fly near grassy ^{James #4?} ~~hills~~ ^{only 85%} ~~wood~~
Perard - grassland with forest edge profile

BDG 94-3 - Mount near ~~fly~~ - same as others - none saved

BDG 94-4 - Cow Chip, same area - TINY ~~2~~ 4! 2 ♀, 2 ♀ - vouchers
85% ; ♀♀ to Harlock for DNA Colony saved in bag

BDG 94-5 - grass - clump & termite nest growing around
it - same species - no vouchers taken

BDG 94-6 - Dead branch in suntrap and termite invasion
inside - nasutes? No 244 feasible - whole
colony keeps in bag since

~~end Perard~~
BDG 94-7 - Cow chip - 85% 4, ♀

Iwokrama - woods near station

Sunday - Dec. 11

BDG 94-8 - Small dead branch ^{Near station} ~~Reservoir~~ 2 ants -
colony not saved, only 10% + DNA vouchers

BDG 94-9 - *Armitermes* (?) sp. - but not near forest edge - 2, ♀
all young - ant colony on edge of ~~forest~~ ^{open area} ~~sample kept~~ (Not with ~~Harlock~~ ~~Shaw~~)

BDG 94-9a - *Armitermes* sp. - colony in recently cut meadow
at Perard, many ♀, young, eggs

BDG 94-9b - Small dead, rotting - rather damp - *Cyrtotermes* sp.
get more 244 for vouchers!

BDG 94-10 - Small dead branch - ~~termite~~ sp. ^{No} ~~sample~~ 11/ Very
small, fresh. ~~termite~~ ^{*M. macrogaster* sp.}

10a (?) - a small winged nuptial label 10 - designate

11? as 10a, date & collection like the same

✓ BDG 94-12: *Lobsterius labialis* - nest up full
get more 2/27 on 6 ft. - concussed, most dead except
for wonder alates - 14 ♀ & ♂ saved - 85% Alby, 3 ~~smaller~~
BDG 94-13: *Acridotermes* sp. saved - many Alates

BD694-B: Amidoneura sp.
get fec.
Amidoneura albida (Hagen)

Fr. 14, 18

Matt: Do 9A First set.
then 19

Sum.

Do

12

15

10/17

24

9

96

BDG 94-16 Termes inquilinus (Emerson)
Termes sp. 2/21-♀ - in carapace nest
 NN-

At Ance - Thu. pm

BDG 94-24 - whole chunk of wood with some
green stuff - Franklinia sp. - Got Dorsella

BDG 94-25 - from rocks at new beach house
great house - Franklinia isolated from destroyed
cotton root 3' large on low-lying shrub
left broken on ground; many pericarps
down rocks - Got all pieces

BDG 94-26 - Agave sp. with large
calle lily - Morley - Palm tree in
background

BDG 94-27 - MSL

BDG 94-27 - Franklinia sp. START
wood piece Sphenocarpus - on beach, rock to
beach - Franklinia - 3' tall - got wood
from beach - above - Franklinia - 4' tall

BDG 94-28 - dead tree stem in forest - this is
yep - Franklinia - above Franklinia - MSL -
pink Miconia sp.

BDG 94-29 - Heliconia sp. - from dead tree
at site - 11/27 - 1' long

BDG 94-30 - This has to be the smallest nose
that was involved! from dead branch - same
material - Subulderma, maybe Subulderma - Check

Aquiri = Ganti

The rivers are full of ^{snails} fish, turtles, caimans, & all good to eat. The forest also has many kinds of fruits and other animals like the Aquiri, the Latta, and the Bush cow. ^{and tiger} These have different names in other countries.

Aquiri is also called Agouti

Latta is also called Pacca or Tepequintle

Bush Cow is also called Tapir

Tiger is also called Jaguar

The people use the river for transportation; canoes and motor boats get people ~~to~~ to where they wish to go.

The residents of river communities enjoy legal fruits ^{including}: Coconuts, Bananas, Plantains, fish and turtles from the river; and game from the forest. Gardening provides root and tuber crops (ground provisions) including Cassava for bread and seasoning and vegetables such as okra, tomatoes, peppers, and

Selected Colony Sites
 Aug-at Aug-uan (Kabskemish)
 Nesteums (damp/dry) ^{sooty} - dead tree, decaying - 1500

I. schwaegii - small dead mangrove ~~1500~~ 1200

Cypselurus hardus - 3000 - structural timber

most *Alptin Kabskemish*
Nesteums ^{conceda} - 3000
 " ^{juniper} - 1800

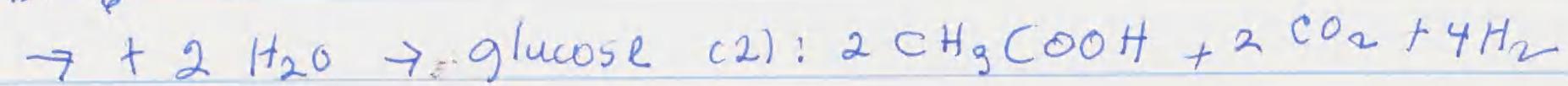
~~the~~
Subterranean

Heterosternus anis - 0.3 million

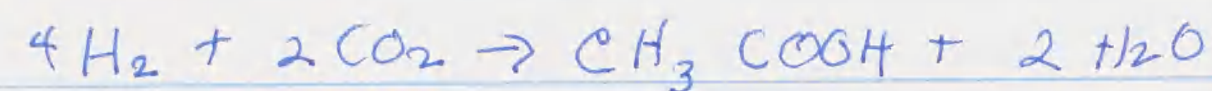
Copelatus formosanus - 1.4 - 3.9 million

Nasutitermes corniger > 1 million

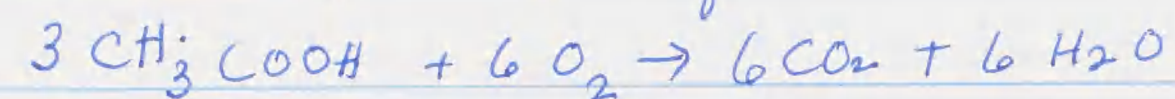
Cellulose: $C_6H_{12}O_6$



then: CO_2 -reducing Acetogenic bacteria convert H_2 and CO_2 to an additional acetate molecule:



3 net acetates formed per glucose monomer are absorbed from the hindgut and oxidized by the Termite to support up to 100% of the insect's respiratory requirement:



Reduction of CO_2 by methanogenic bacteria will yield H_2 and CH_4

H_2 and CH_4 are ^{also} emitted by Termites, but the amount of emitted methane is small in wood-feeders.

Range, CH_4 emitted: micrograms of product / gm termites / hr.

Wood feeders: 0.00 \rightarrow 1.30* (most less than 0.30)
(single species)

Grass feeders: 0.18

Fungus growers: 0.00 \rightarrow 0.25 \rightarrow 0.67

Soil feeders: 0.39 \rightarrow 1.09 most above 0.45

Little Cayman - 1995

Feb. 13, 1995

Cryptotermes sp. - dead wood at base of
LC 95-1 - *Casuarina* tree in front of Private Bank - vigorous
hardwood tree - has pretty dry at lowest point.
Imm, 21, Pa. - coll. MC - 85%, Aho. for DNA

LC 95-2 - *Termes* sub *melindae* - same tree, near site
occupied by *Cryptotermes* - 21, 22 - 1st form? - Aho. 85%

LC 95-3 - *Paratermes* *hawaiiensis*
~~*hawaiiensis*~~ - same tree - about #2,
21, 22, 23 - 85% + DNA (also ETOH)

LC 95-4 - *Macrotermes* *ahissae*
~~*Termes*~~ - near (branch side) of main office
Private Bank - in rotten log - partly under some
very colony of *Cryptotermes* - Aho. + 85%
(queen belongs here)

LC 95-5 - dead slates from Solahi Site 2 - *Macrotermes*
2nd form, subflouring under rug - Imm, dead
from *Macrotermes* west end

Feb. 14, 1995 - Private Bank - Back side of main office -

LC 95-6 - *Cryptotermes* *hawaiiensis* - large colony in
partly buried log - 2, 2 - 85%, Aho. + Salpeter

LC 95-7 - *Termes* *melindae* - same site as #4
~~*Macrotermes*~~ - 21, 22 - 85% (2/4, 2/2)

LC 95-8 - *Cryptotermes* sp. - from sea group dead slates
on line branch - near of PP main building -

Feb. 15 - *Stegomyia* - 21, Pa

LC 95-9 - *Cryptotermes* *hawaiiensis* - 2, 2 - West End, 1st L-H
White - Robin A. Galt - Contractor - in pellets & boring
of 4/10 *Macrotermes* - 85% + DNA

Cyprus Beach - Beach Survey

2 pieces of wood on beach to Incubation
 - found by B + D Ford

Feb. 17, 1995 - Fri.

CB95-1 - 2, 14 - 85% and for DNA

LC95-9 - Captacula facile - in piece of weathered
 driftwood on beach near promenade ~~at~~ west of

Parade Point Beach - on depositing shore
 exposed to currents carrying debris from Jamaica
 Fore beach - ^{storm} high tide

Collector: Barbara Ford (233 Sundance Lane,

Feb. 16 Wickenburg, CA - 95076 - FAX 415: 852 4148
 (c/o David Ford)

LC95-10 - C. hawaiiensis - from large piece of driftwood on
 beach, shore just below Point Point, going towards
 Lighthouse Point - ^{found} by B. Ford. Extensive carpen
 in sand beneath ~~the~~ wood. Wood ca 6 ft. long,
 1 ~~ft.~~ ft. wide, ca 8" thick. Soil beneath wood
Nympha meniscus cap. in carpen.

Many other pieces of driftwood on beach had
 living larvae of hawaiiensis. 2, 3, 11/2, 18.

LC95-11 - Feb. 16 - same beach, small piece of driftwood
Kalibutitika, prob. Incubation - 2, 14. DNA + 85%

Name:

Address / FAX #

P = paragraph
L = line

Please call me at 809: ~~809: 809~~ to confirm receipt and
resolve possible questions - Wednesday morning - 10:30 - 12:00 N.

Requested Changes:

Page 1 - P₃ L₅ - Father taught Agriculture; (~~the~~ Biology year
was an emergency fill-in); L₆ - ... to study Biology.

Exp. Note (Genetics ~~was~~ not a separate discipline ^{then} in those days)

L₇ - ... curriculum, she changed to Arts programs, but
later, on the advice of a competent new biologist,
she reentered the Biology program. He recommended
U of Chicago and Ecology as her most rewarding
area and place of study for further study.

P₄, L₁ - she married a fellow Biology major while ~~an~~ an
undergraduate; his call to military service and the
dependency allowance allowed her to enter the University
of Chicago Zoology department in 1944.

Page 2 - P₁ L₂ - delete "Still".

P₁ L₈ - ... with maintenance of the many ~~terminals~~ etc.

P₂ L₂ - delete "for vacant posts" - ~~as~~ the faculty members
were mainly too old for military service.

L₄. Delete entire section; substitute: The end of WWII
permitted her husband to finish his undergraduate pre-medical
education; ~~and~~ he chose Howard University, ~~in Washington, D.C.~~
she joined him, and secured employment in the
Zoology department there. She taught during the
regular school year, ~~and~~ returned to Chicago in
summers to complete her research for the doctorate.

~~With~~ Howard in 1949, in 1950 ~~she~~ qualified ^{for} Assistant
Professor; when this was not granted in 1951, she accepted

a full professorship at Florida A & M in Tallahassee,
where she served as teacher, ^{and} department head, ~~and briefly,~~
~~until 1963.~~ She ~~then returned to Howard.~~

She was an active participant in the civil rights
movement of the late 50's, and, at one time, with
^{students and the} ~~chairman of the~~ ^{department,} searched a newly-equipped building for a
threatened bomb plant.

She returned to Howard, and Washington, D.C. to
improve educational opportunities for her children
(~~2 sons~~ ~~and a~~ ~~son~~ ^{At Howard,} two of her
best - - -

Prop 3. l. 2. ~~Collins had~~ ^{She} ~~that~~ amassed a large collection
of Guyanese termites, identified with the aid
of Emerson's excellent key and help from
his ~~museum~~ collection ^{now} housed at the
American Museum of Natural History. ~~Collins~~ She
expressed interest in providing a reference
collection for the Biological Diversity Program ^{the} ~~Guianas~~
established so effectively by Dr. Vicki Funk -
and her interests fitted well with the important
discipline of microbial ^{genetics} identification by the
molecular Systematics / Microbiology disciplines
represented by Dr. Kane -

Prop 4 - l. 6 - substitute "material" for "specimen"; we
don't want the Fish & Wildlife Service on our necks.

Introduction

The Cayman Islands (here) a relatively large (5000 sq. km) and diverse (Terrestrial) fauna. ~~from the species~~
Cayman (35 km long and about 14 km wide, of irregular shape, there has been so far has been found to have ² ~~10~~ species of three different families; little Cayman 5 species in 3 families, and Cayman Brac, the largest, 5 described species ^{two} ~~one~~ ^{standards} of the ^{Possible} ~~unidentified~~ species awaiting further study and description include 2 for Grand Cayman and one for Cayman Brac.

The island ~~part~~ ^{part} ~~made of~~ ^{made of} ~~volcanic~~ ^{volcanic} ~~calcareous~~ ^{calcareous} marine deposits, ~~with~~ ^{with} ~~originating~~ ^{originating} by uplift. ~~Grand Cayman and~~ ^{Grand Cayman and} ~~Black~~ ^{Black} ~~Barbary~~ ^{Barbary} in the late Pleistocene (Adams & Smith, 1994). Connections to continental land masses seem unlikely, so the Termitid species here, as do ^{the} ~~the~~ land ^{things of} ~~land~~ ^{things of} ~~plants~~ ^{plants}, had to originate elsewhere. The long isolation has permitted evolution of endemic species ^{the} ~~the~~ ^{insect} ~~insect~~ ^{reptile} ~~reptile~~ ^{plants} ~~plants~~ ^{land} ~~land~~ ^{snails} ~~snails~~ ^{and others} ~~and others~~. However, the described Termitid species here ~~have~~ ^{have} ~~not yet shown~~ ^{not yet shown} ~~any~~ ^{any} ~~features~~ ^{features} ~~significant~~ ^{significant} ~~different~~ ^{different} ~~from~~ ^{from} ~~representative~~ ^{representative} ~~elsewhere~~ ^{elsewhere} in the Neotropics. Colonization from neighboring islands and land mass is continuing for several species.

History of Termitid Studies on the Cayman Islands

The first formal ^{expedition} ~~attempt~~ ^{expedition} ~~at~~ ^{at} ~~collection~~ ^{collection} ^{specimen} ~~of~~ ^{of} ~~termites~~ ^{termites} on the Cayman Islands was the Oxford University Cayman Island Biological Expedition in 1938. ~~The~~ ^{The} ~~first~~ ^{first} ~~Mr. C. Bernard Lewis~~ ^{Mr. C. Bernard Lewis}, of the Entomology Department at the Oxford University Museum, was responsible for the insect, and he sent these specimens to Dr. Alfred Emerson, the University of Chicago, for identification. Emerson's reply, dated Jan. 26, 1940, is in the volume "The Cayman Islands", Emerson.

? Just list the Termites Emerson
identified - save the rest for lat

determined the fauna to include ~~68~~ species, as follows:

Halotermes:

Incisitermes tolozani Snyder

1 col of damage to a house in Honduras

a large termite found in driftwood and in dead trees in moist areas, especially mangroves; common in the Bay area before draining operations; first described from Panama. found ~~on shore~~ in Honduras, Belize and many Caribbean Islands

2 ~~sp~~ undetermined species of Incisitermes - ~~not to~~ ~~confuse~~ - Emerson held these for further study and association with the proper soldier.

Nestitermes angustoculus Snyder (now Nestitermes

capistratus peunzei, a larger Halotermes

~~nestitermes~~ ~~peunzei~~ for dead branches of live tree and ^{very} damp dead wood; ~~not~~ found attacking Arboreo ~~tree~~ and Pecan trees, and common in the roots of Oleander. This Termite attacks young teak trees in Cuba, and damages fruit and nut trees in south Florida. This species has been recorded for Barbados, Cuba, Dominica, Hispaniola, Jamaica, Montserrat, Puerto Rico, Trinidad and Tobago and Caicos. No structural damage recorded, but considerable agricultural damage

An undetermined species of Cryptitermes, alates taken at light trap (Little Cayman)

A new species of Cryptitermes alate to be kept until soldier has been located (Little Cayman)

Termitidae

Nasutitermes pilifrons (Holmgren) - now Nasutitermes

nigriceps (Haldeman) - a termite with soldiers having heads prolonged to a hollow "nasus" through which defensive glue can be squirted

Microceritermes albipes Emerson, taken on both

~~68~~ ~~69~~ Grand Cayman and Cayman Brac

This material ~~is~~ is now in England (paid); the specimens Emerson retained for study are ~~in~~ ^{now} in the American Museum of Natural History collection with the rest of Emerson's material; ~~now~~ they are now on loan to us for completing the termite survey.

Museum - go along front going North before George King

949-7820

Call in
After

Church St. GT 90
West Bay

Museum - go along front going North
Before Surge Run

949-7820

Mr. Surge Run

Church St. GT

Go

West Bay

Call in
Run

32
? Just list the Termites Emerson
identified - save the rest for later
determined the fauna to include ~~68~~ species, as follows:
Halotermitidae:

Incisitermes Tahogae Snyder 1 char of damage to a house in Honduras
a large termite found in driftwood and in dead trees in moist areas, especially mangroves; common in the Bay area before draining operations; first described from Panama. found ~~also~~ in Honduras, Belize, and many Caribbean islands
2 ~~sp~~ undetermined species of Incisitermes; ~~not to~~ ~~be~~ ~~confused~~ - Emerson held these for further study and association with the proper soldier.

Nestitermes angustoculus Snyder (now Nestitermes capitatus Seumeister, a larger Halotermitid ^{Snyder}
~~nestitermes~~ ~~capitatus~~ for dead branches of live tree and ~~very~~ damp dead wood; now found attacking ^{also} ~~Andeano~~ ~~tree~~ and Pecan trees, and common in the roots of Oleander. This Termite attacks young teak trees in Cuba, and damages fruit and nut trees in south Florida. This species has been recorded for Barbados, Cuba, Dominica, Hispaniola, Jamaica, Mandanah, Puerto Rico, Trinidad and Tobago and Caicos. No structural damage recorded, but considerable agricultural damage.

An undetermined species of Cryptitermes, alates taken at Light Trap (Little Cayman)

A new species of Cryptitermes alate to be kept until soldier has been located (Little Cayman)

Termitidae

Nasutitermes pilifrons (Holmgren) - now Nasutitermes nigriceps (Haldeman) - a termite with soldiers having heads prolonged to a hollow "nasus"; through which defensive glue can be squeezed
Microcerotermes arbores Emerson, taken on Tort. ~~68~~ ~~69~~ Grand Cayman and Cayman Brac

This material ~~is~~ is now in England (part); the specimens Emerson retained for study are ~~now~~ ^{now} in the American Museum of Natural History collection with the rest of Emerson's material; ~~now~~ they are now on loan to us for completing the termite survey.

Little Cayman Brains

Vit A, Beta-Carotene
 Alfalfa tablets

EPO - Primoril Pill

~~allergy C caps~~

folie Acid

B6

B100

TAURINE

pantothenic Acid B5

54 Ginkgo

call shirley macken

cook Book to Gladys

paper work

Insurance

85%

absolute alcohol

back Hanging gill

Ivory Soap

clear channels

ET 27

COOPERS LAST

Rich & Sarita Turman
525 Macon Dr.
Bismarck, ND 58504

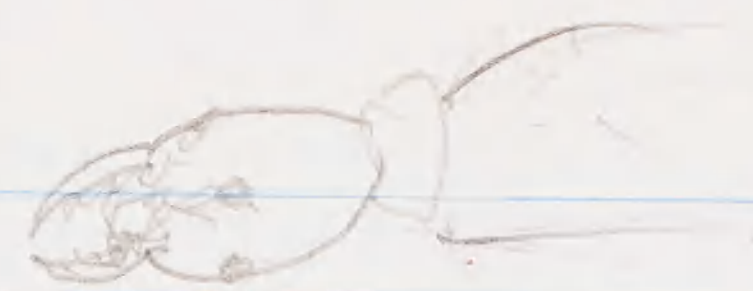
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Rich & Sarita Turman

525 Macon Dr.

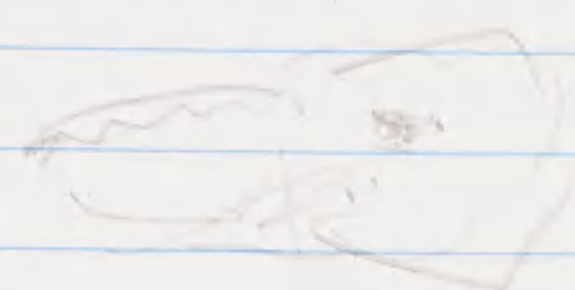
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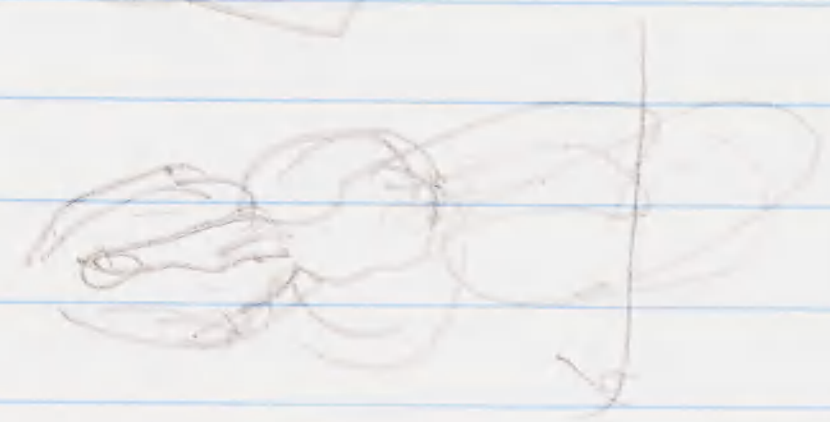


Tempe

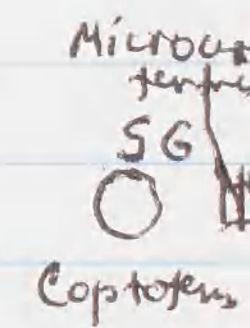
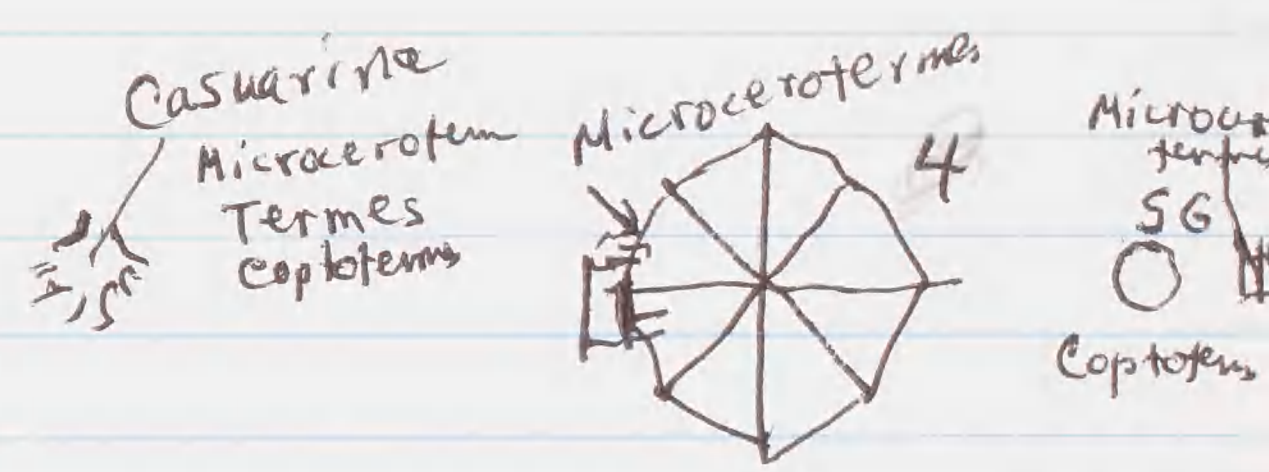
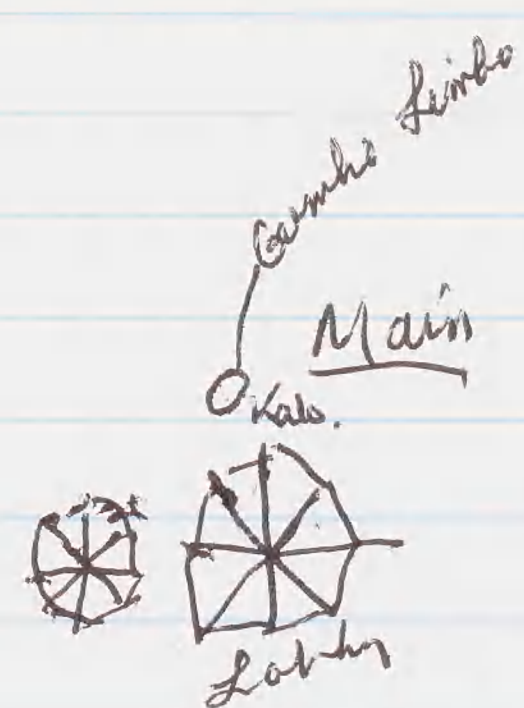
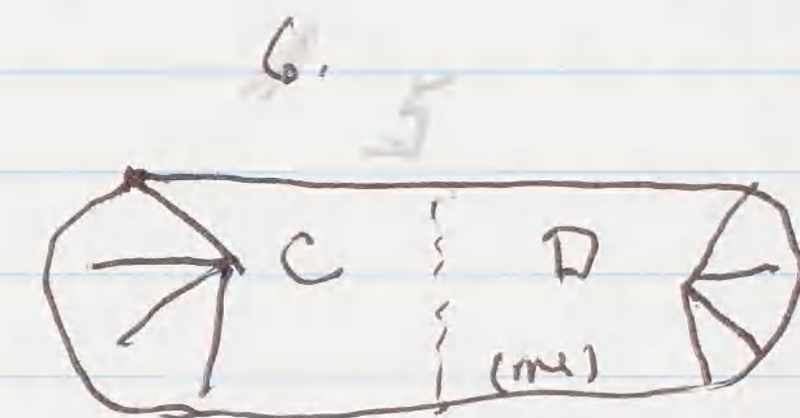
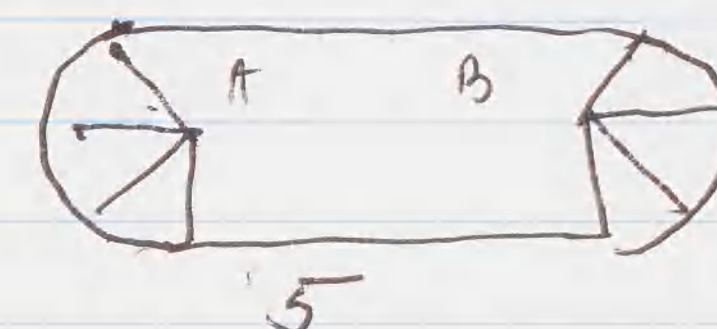
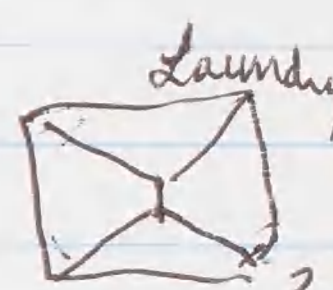
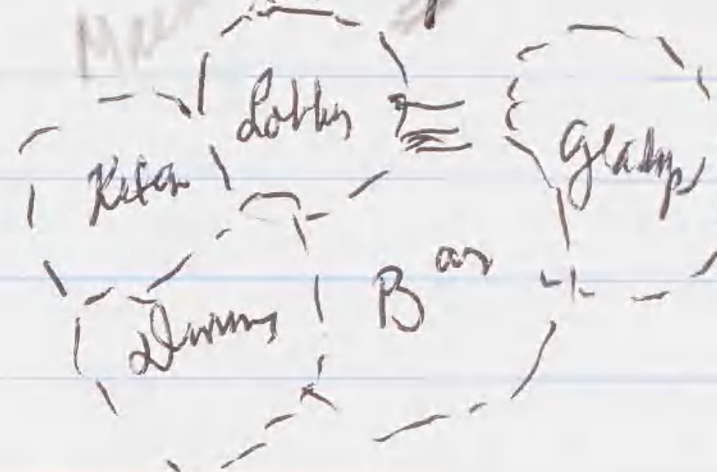
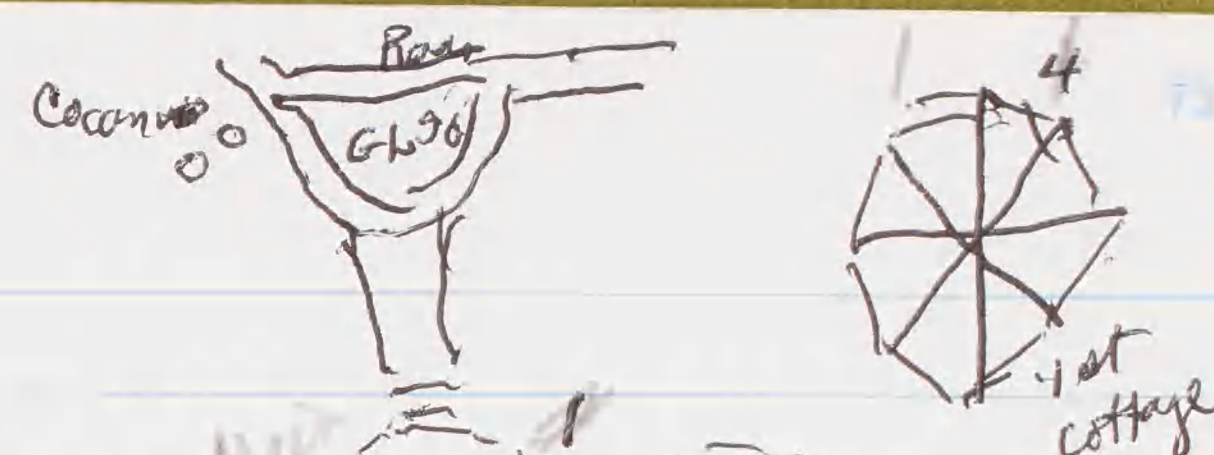
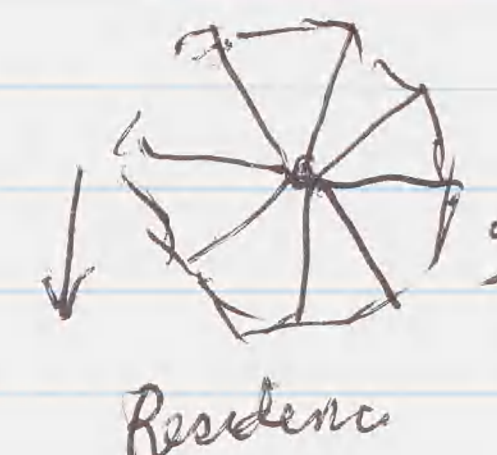
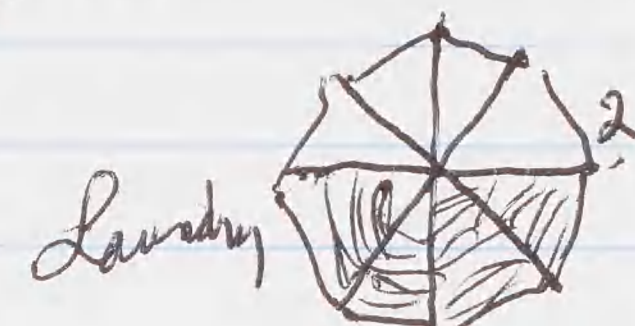
Kali

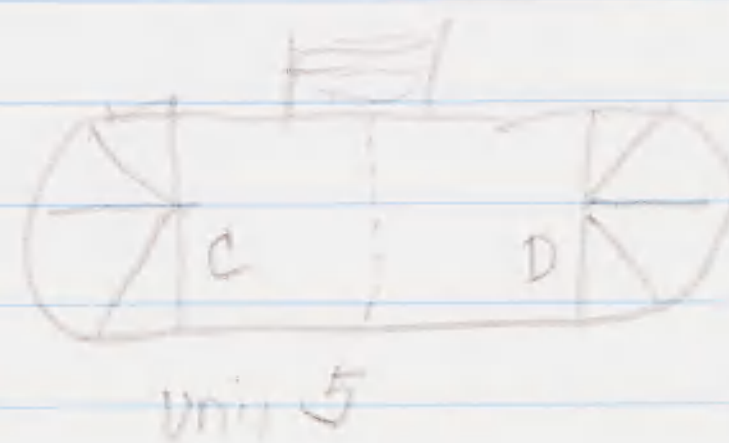


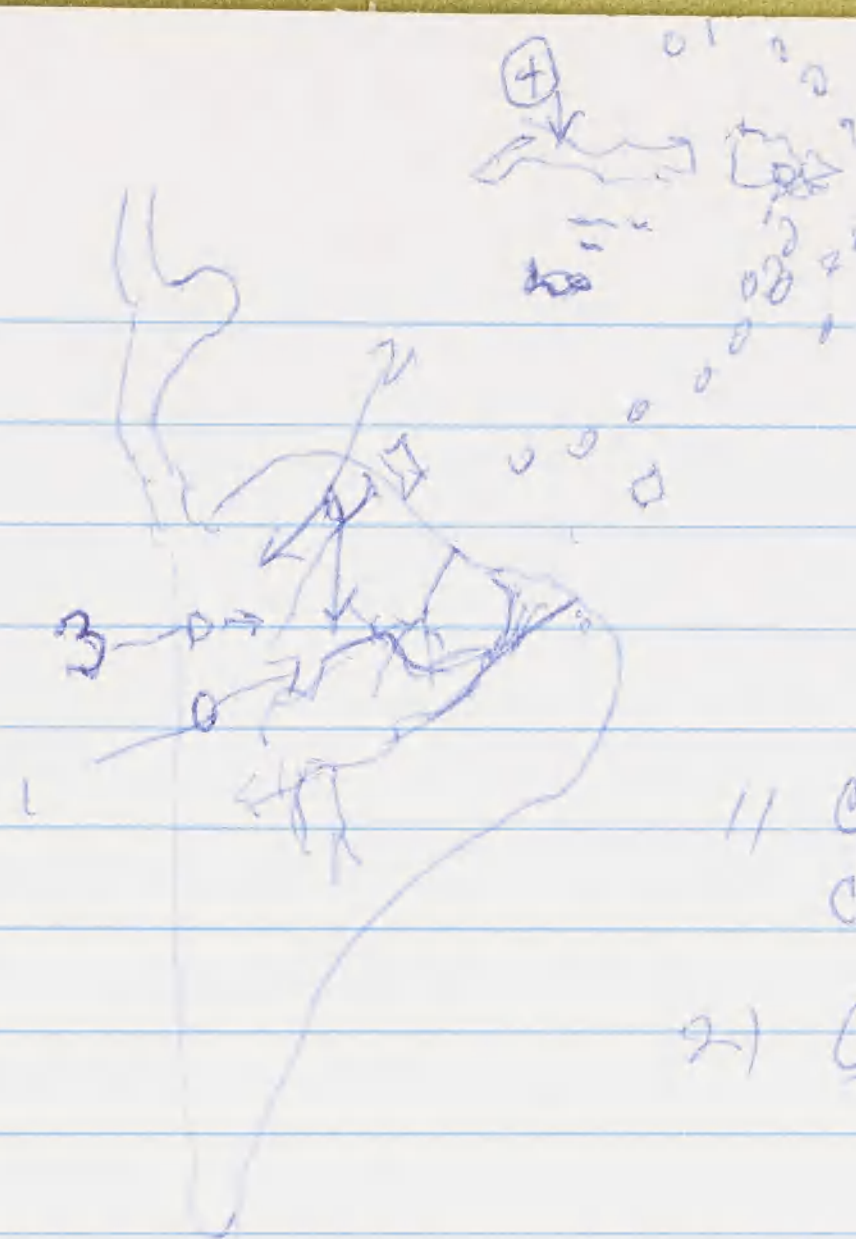
1/5



1. Main Building







1) *Ctenodactylus cyphogaster*: Bolivia, Brazil,
~~C. caripina~~ Paraguay

2) *C. caripina*: Bolivia, Brazil, Venezuela,
Guyana, Surinam

3) *C. latirostris* - Ecuador

4) *C. guantanamoensis* Knech, Schiff, Rivas

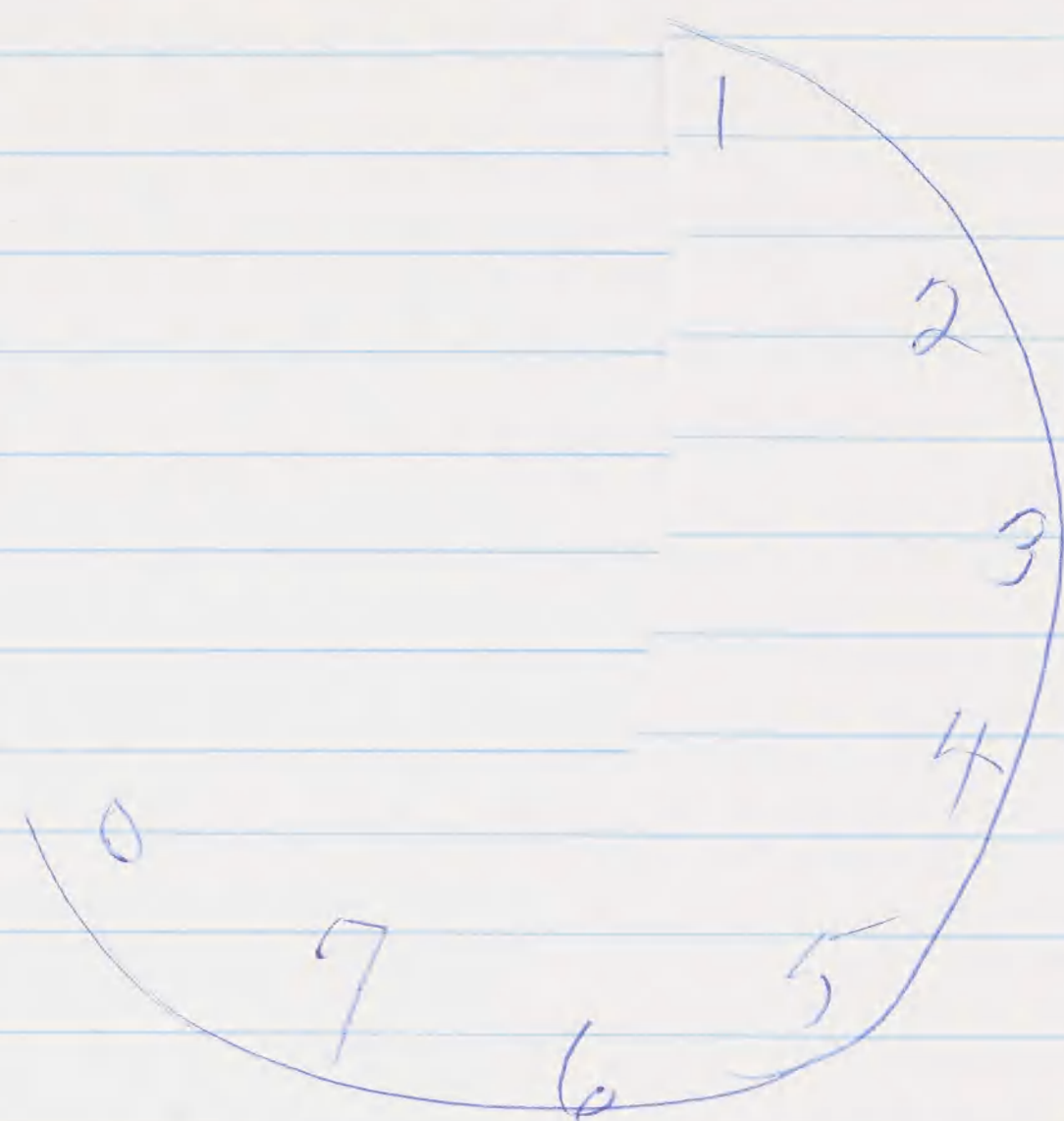
There was once a boy named Jason:

Mother: Makona Abernethy ALLCOCK
Father: Kenneth Butler
grandfather:

Before Irishman Station, they lived at
Surama

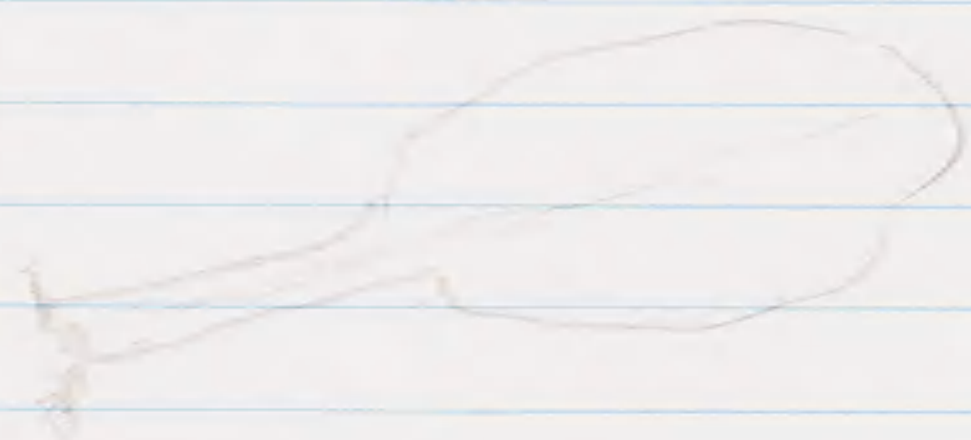
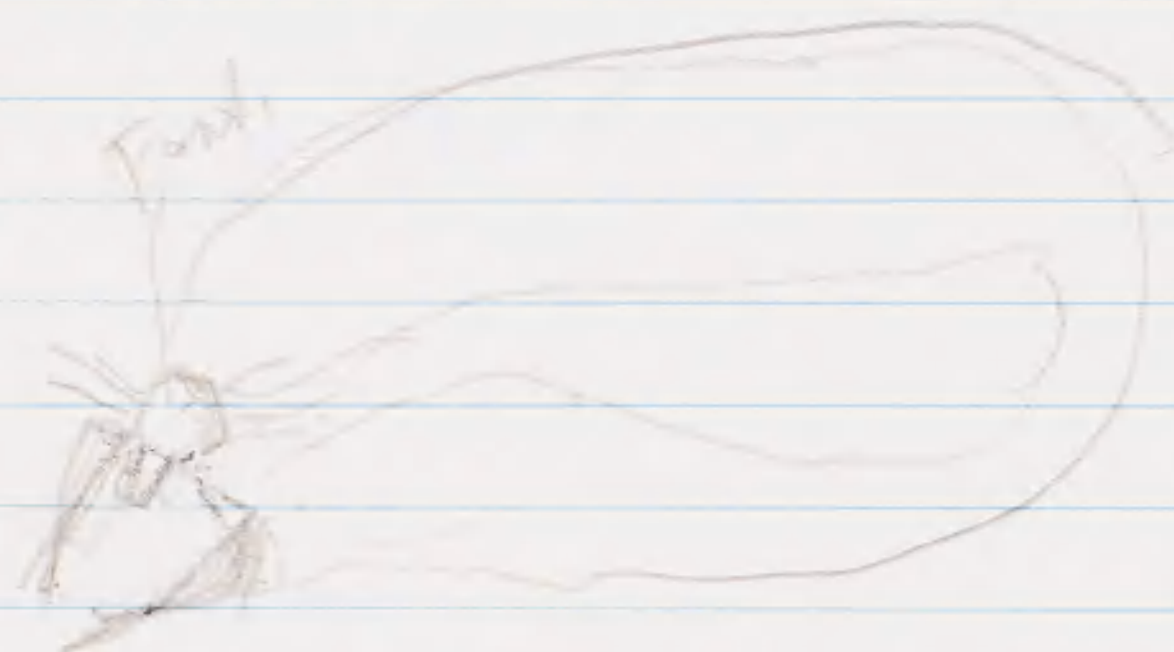
Margaret
S. Coll:

Margaret S. Collins
1642 ~~Penn~~



DNA
LC 95
7

System Lost Communication to
V5, Saturday, Oct. 17th at
11:50 am.

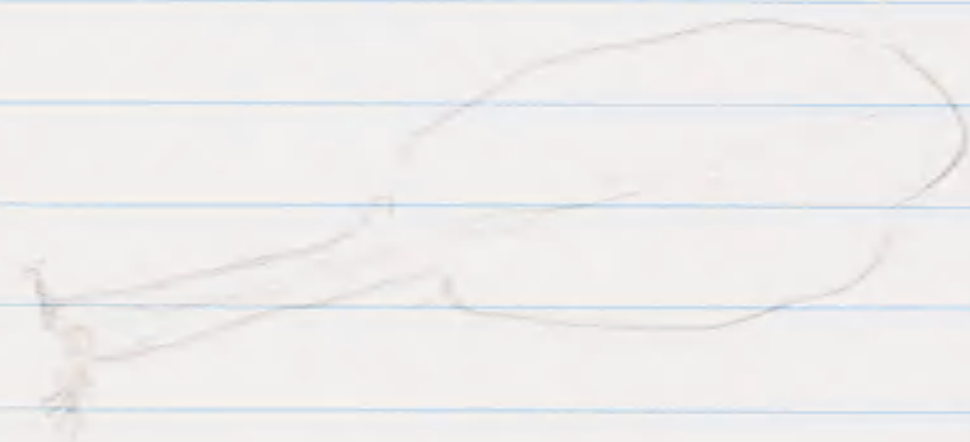
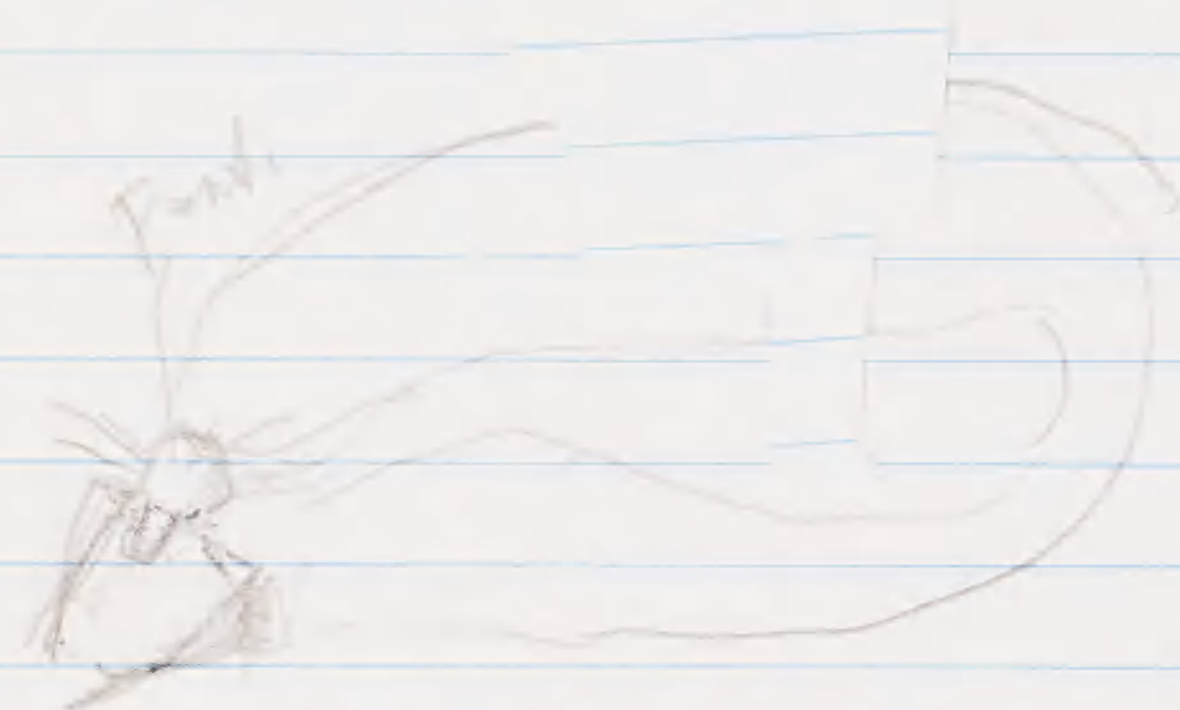


Medium
at distance
Cayman

System L^a

7/5, Satu

11.50 a.



Ashton El Banks

West Bay

P.O. Box 218

Grand Cayman

Cayman Islands

B.W.I.

809 9493532

Direct

Herbal

Medicine

practitioner
Grand Cayman



